

II. REMARKS

A. Introduction

In this Office Action claims 2-6 are noted as pending and are rejected based on prior art.

In summary of this Response, the written description has been amended to a minor extent, claim 6 is canceled, claims 2-5 have been amended, and remarks are provided.

B. Grounds for Entry of this Response Pursuant to 37 C.F.R. 1.116 and Allowance of this Application

Applicants request entry of this Rule 116 Response because: (a) a rejected claim has been canceled; (b) it is believed that the amendment of claims 2-5 puts all pending claims into condition for allowance; (c) the amendment was not earlier presented because Applicants believed in good faith that the cited prior art did not disclose the present invention as previously claimed; and (d) the amendment should not entail any further search by the Examiner since no new features are being added or new issues being raised.

C. Rejection of Claims 2-6 Under 35 U.S.C. §103

These claims are rejected as being rendered obvious by a combination of O'Connell et al., U.S. Patent No. 3,309,892, and by Bauerlein, U.S. Patent No. 3,580,007. It is noted that this is the first time that O'Connell et al. is being applied against the claims and is the primary reference in the rejection.

O'Connell et al. is cited for teaching the invention as recited at least by the sole independent claim 2 because it teaches "an ice level sensing unit 92 moving a cam 133 against a switch 125-131 to shut off electricity to a drive motor when the ice storage tray is full", the Action relying on particularly, Fig. 6 and Col. 5, lines 3-18. While the recited pulleys are admittedly not shown in this reference, Bauerlein is cited for teaching same.

As noted above, claim 6 has been canceled, and the subject matter thereof has been added to independent claim 2.

For the following reasons, it is respectfully submitted that the present invention, as recited by amended claims 2-5, was not rendered obvious by the cited combination.

Initially, the member 92 of O'Connell et al., in direct contrast to the reason it is being used as an integral teaching of this primary reference, has nothing to do with "ice level sensing." The arm 92 is a "bin feeler" only. That is, as noted in Col. 4, lines 26-33, the bin 83 cooperates with the bin feeler when the door is closed. This arm 92, has a first end which is pushed by the bin 83 and a second, opposite end to which is connected to a coil spring 121. When the bin 83 is in the freezer as shown in Fig. 7, and regardless of whether the bin has a single ice cube therein or not, the first end of the arm 92 is moved to the right in the Figure, thereby biasing the spring 121. Col. 4, lines 55-60. This is a threshold function to allow ice to be made and, of course, collected in the bin. When the bin 83 is not in the freezer, again regardless of the ice therein, if any, as shown in Fig. 6 the arm 92 is moved to the left, which removes bias on the spring 121 and causes the switch 125 to shut down power to prevent any ice from being made, not because there is too much sensed, but because there is no bin to catch any ice being made. See Col. 2, lines 13-16, Col. 5, lines 34-36. When the bin is returned to its position in the freezer, the switch causes the electricity to be turned back on, but this has nothing to do with how much ice is in the bin 83.

As another example of why the arm 92 is not relevant to sensing a particular level of ice, although not shown in the drawings of O'Connell et al., it can be seen that if the bin 83 were to be put in the freezer incorrectly, i.e., with the arm 92 inside thereof, the arm 92 would be to the left and no ice would be made and therefore none to sense.

Notwithstanding the above, O'Connell et al. also includes a separate "cube feeling arm" 135 which is operatively connected to the bin feeler arm 92 via the spring 121. That is, when the bin 83 is in the freezer, as noted above Col. 4, lines 55-60, the spring 121 under tension overcomes the force of a counterweight 138 on an opposite end of the arm 135. This causes a roller follower 131 of the switch assembly to engage an eccentric 133 and oscillate for as long as the cube feeler 135 is free to move, and thereby allow the ice maker to operate normally. Col. 4, lines 55-74. However, when the ice gets to a predetermined level, the oscillating movement of the arm 135 is prevented, and the switch assembly is spaced from the eccentric, which causes the switch 125 to cut off electricity to the motor. Later, when ice is removed from the bin by the user, the eccentric/roller following relationship is regenerated to allow more ice to be made.

In contrast to this structure, wherein the operation of the ice maker is stopped when there is no longer any engagement between a switch and a cam, the present invention as now

recited by amended independent claim 2 relies upon not only an end of the sensing lever 51 being moved toward a switch, but the cam directly urging the sensing lever against the switch, until ice is taken from the bin sufficient to cause the sensing lever 51 to move from this first to a second position. Also, the present invention does not require O'Connell et al.'s pre-biasing of a spring via a bin sensing arm to overcome a counterweight, which complicates the apparatus.

Further, as noted above, the subject matter of claim 6 has been added to claim 2 to indicate that the switch shuts off the electricity, when the switch is pressed by the sensing lever over a predetermined period of time. With O'Connell et al., power is off when the switch does not make contact with the cam follower 131 (See Fig. 7, phantom lines and Col. 5, lines 1-18).

It is also respectfully submitted that the shortcomings of O'Connell et al. discussed above, are not compensated for by the secondary reference, Bauerlein.

As mentioned in the previous response, Bauerlein shows a movable rod or arm 80 that detects the amount of ice in the bin 70. The arm 80 is mechanically connected to a linkage 83 that rotates between a position wherein a finger 99 is disengaged from a motor 30 armature 97 with an abutment member 98 thereon (allowing the motor to turn the conveyor 11 to make ice), when the bin 70 is not full, to a position where the finger 99 contacts the abutment member and prevents rotation of the armature (stopping the movement of the conveyor and the production of ice), when the bin 70 is full. See, e.g., Col. 6, lines 9-36 and 49-70.

The engagement of the finger 99 of the linkage 83 and the abutment member does not terminate the electricity to the motor (which is a "continuously operating electric motor", Col. 3, lines 34-35), but merely prevents the motor from turning, i.e., stalls the motor to stop the ice maker from operating (Col. 6, line 64). Also, the mechanical arrangement of the abutment member 98 and finger 99, as well as that of the abutment member 98/armature 97 connection, would appear to be subject to wear and possibly breakage (the reference even has to suggest means for minimizing these effects at Col. 7, lines 44-47).

The Action fails to suggest how one of ordinary skill would have or could have used the teaching of Bauerlein with either the bin sensing arm 92 or the ice level sensing arm 135 of O'Connell et al. For example, would one of ordinary skill consider using the arm 80 and related complicated linkage 83 of Bauerlein to cause a cam to directly contact and move one end of O'Connell et al.'s arms 92 or 135 against the switch to shut off the electricity. Compare amended claim 2 herein. It is doubted that such an effort would be made since it appears that Bauerlein is not even directed to shutting off the power as noted above, but moving the finger 99

out of abutting engagement with the abutment member 98 to release a motor 30, awaiting the removal of ice to re-engage the motor.

III. CONCLUSION

In view of the foregoing actions taken by Applicant, it is believed this Response places this application in condition for allowance, and therefore should be entered and a Notice of Allowance issued for claims 2-5.

If there are any remaining formal matters that need to be attended to in this application, it is requested that the Examiner contact the undersigned attorney at the below-identified telephone number at the Examiner's convenience.

If any additional fee is required in connection with the filing of this Response, please charge same to our Deposit Account No. 19-3935.

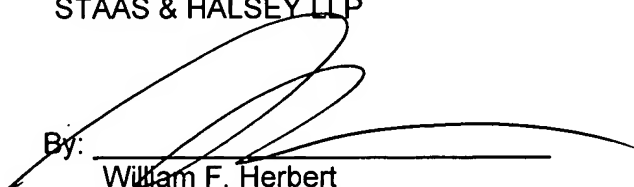
Respectfully submitted,

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